AMENDMENTS TO THE CLAIMS:

Claims 1-5.   (Canceled).

Claim 6.   (Currently amendment) A method of embedding an image into two images, comprising:

performing a digital halftoning process on a Cartesian product of color spaces to embed the image into the two images,

wherein the digital halftoning process comprises an iterative isotropic halftoning process,

~~The method of claim 4,~~ wherein the iterative isotropic halftoning process comprises:

for each iteration

   for each i

      for each j

         for each output vector o = (o_1, o_2, o_3) ? P

            replace $\text{Outimage}_k(i, j)$ with o_k for k = 1, 2, 3,

            set $Error(o) = \sum_{k=1}^{3} v_k \left\| L(Outimage_k - A_k^{'}) \right\|$

         endfor

         find output vector $o_{min} = \arg\min_{o \in P} Error(o)$

         set $\text{Outimage}(i, j) = o_{min}$.

      endfor (j)

endfor (i)

wherein if Outimage has not changed between two iterations or maximum number of

iterations reached, then exit the iterations loop,

where:

A$_1$', A$_2$' and A$_3$' are input images;

P comprises a set of output vectors;

Output comprises A$_1$'and A$_2$' where (A$_1$,A$_2$,A$_3$) = Outimage which resembles (A$_1$', A$_2$',

A$_3$');

v$_i$ determines how strongly the error in each image is minimized; and

L comprises a linear space-invariant model of a human vision system.

Claim 7.   (Original) The method of claim 6, wherein said Outimage is initialized using a

random set of pixels.

Claim 8.   (Original) The method of claim 6, wherein said Outimage is initialized using a

uniform image of a single output vector.

Claim 9.   (Original) The method of claim 6, wherein said Outimage is initialized by

performing vector error diffusion.

Claim 10.   (Original) The method of claim 6, wherein said Outimage is initialized by

performing modified error diffusion.

Claim 11.   (Original) The method of claim 6, wherein pixels of the input image is within a convex hull of the output vectors.

Claim 12.   (Original) The method of claim 6, further comprising gamut mapping the images.

Claim 13.   (Original) The method of claim 12, wherein the gamut mapping comprises:

for $p = (p_1, p_2, p_3) \chi S$,

$M(p) = (s_1p_1 + d_1, s_2p_2 + d_2, s_3p_3 + d_3)$

where:

s_i comprise real numbers denoting scaling factors; and

d_i comprise offset vectors in the color space.

Claim 14.   (Original) The method of claim 13, further comprising using the Qhull algorithm.

Claim 15.   (Original) The method of claim 12, further comprising optimizing the gamut mapping.

Claim 16.   (Original) The method of claim 15, wherein optimizing the gamut mapping comprises:

$$\max_{s_i, d_i} \min\left(\frac{s_1}{\alpha_1}, \frac{s_2}{\alpha_2}, \frac{s_3}{\alpha_3}\right) \text{ such that } M(S) \, \chi \, H$$

wherein H is the convex hull of the output vectors.

Claim 17.   (Original) The method of claim 15, wherein the optimizing of the gamut mapping comprises:

solving $\max_{s_i, d_i} s_1 s_2 s_3$ such that $M(S) \, \chi \, H$,

wherein H comprises the convex hull of the output vectors.

Claims 18-32.   (Canceled).